

Recombinant Human Interleukin 15

Catalog Number: SJB08

Strength: 10 μ g, 100 μ g

Specifications and Use

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| Description | <ul style="list-style-type: none">● Recombinant human IL-15 produced in E. coli is a single, non-glycosylated, polypeptide chain containing 114 amino acids. |
| Source | <ul style="list-style-type: none">● E. coli. |
| Molecular Mass | <ul style="list-style-type: none">● Approximately 12.7kD. |
| Purity | <ul style="list-style-type: none">● $\geq 97\%$. |
| Endotoxin Level | <ul style="list-style-type: none">● <1EU/μg, determined by the LAL method. |
| Biological Activity | <ul style="list-style-type: none">● Measured in a cell proliferation assay using CTLL-2. The specific activity shall be not less than 5$\times 10^8$IU/mg. |
| Formulation | <ul style="list-style-type: none">● Sterile lyophilized powder, in PBS containing 0.1% HSA, pH7.4. |
| Reconstitution | <ul style="list-style-type: none">● It is recommended to reconstitute the lyophilized rHuIL-15 in 0.2ml sterile water. |
| Storage | <ul style="list-style-type: none">● Lyophilized samples are stable for 36 months from date of manufacture at -20$^{\circ}$C to -70$^{\circ}$C.● Upon reconstitution, this cytokine can be stored under sterile conditions at 2- 8$^{\circ}$C for one month or at -20$^{\circ}$C to -70$^{\circ}$C in a manual defrost freezer for three months without detectable loss of activity.● Avoid repeated freeze-thaw cycles. |

Interleukin 15 (IL-15) is a widely expressed cytokine that is structurally and functionally related to IL-2. Mature human IL-15 shares 70% amino acid sequence identity with mouse and rat IL-15. Alternate splicing generates isoforms of IL15 with either a long or short signal peptide (LSP or SSP), and the SSP isoform is retained intracellularly. IL-15 binds with high affinity to IL-15R α . It binds with lower affinity to a complex of IL2R β and the common gamma chain (γ c) which are also subunits of the IL-2 receptor complex. IL-15 associates with IL15R α in the endoplasmic reticulum, and this complex is expressed on the cell surface. The dominant mechanism of IL-15 action is known as transpresentation in which IL-15 and IL-15R α are coordinately expressed on the surface of one cell and interact with complexes of IL2R β / γ c on adjacent cells. This enables cells to respond to IL-15 even if they do not express IL-15R α . Soluble IL-15 binding forms of IL-15R α can be generated by proteolytic shedding or alternate splicing. These molecules retain the ability to bind tightly to IL-15 and can either inhibit or augment IL-15 function. Consistent with its shared use of IL-2 receptor subunits, IL-15 induces IL-2 like effects in lymphocyte development and homeostasis. It is particularly important for the maintenance and activation of NK cells and CD8+ memory T cells. IL-15 also exerts pleiotropic effects on other hematopoietic cells and nonimmune cells. Ligation of membrane associated IL-15/IL-15R α complexes induces reverse signaling that promotes cellular adhesion, tyrosine phosphorylation of intracellular proteins, and cytokine secretion by the IL15/IL15R α expressing cells.

FOR LABORATORY USE ONLY.

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